

Name: _____

Per: _____

Section 20.2 Electric Current

(pages 604–607)

This section discusses electric current, resistance, and voltage.

Reading Strategy (page 604)

Predicting Before you read, write a prediction of what electric current is in the table below. After you read, if your prediction was incorrect or incomplete, write what electric current actually is. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

Electric Current

Electric Current Probably Means	Electric Current Actually Means

Electric Current (page 604)

1. What is electric current?
2. Complete the following table about electric current.

Type of Current	How Charge Flows	Examples
Direct		
Alternating	Two directions	

3. Electrons flow in the wire from a(n) _____ terminal to a(n) _____ terminal.

Conductors and Insulators (page 605)

4. What is an electrical conductor?
5. What is an electrical insulator?
6. Is the following sentence **true or false**?

“Metals are good conductors because they do not have freely moving electrons.”

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Match each material to the category of a conductor or insulator.

Material	Category
7. Copper: _____	a. conductor
8. Plastic: _____	b. insulator
9. Rubber: _____	
10. Silver: _____	
11. Wood: _____	

Resistance (page 605)

12. Explain why the current is reduced as electrons move through a conductor.

13. Circle the letter of each factor that affects a material's resistance. (there is more than one!!!)

- | | |
|-----------------|--------------------|
| a. its length | b. its temperature |
| c. its velocity | d. its thickness |

14. What is a superconductor?

Voltage (page 606)

Match each term to its definition.

Definition	Term
15. _____ A device that converts chemical energy to electrical energy	a. flow of charge
16. _____ Requires a complete loop	b. voltage
17. _____ The difference in electrical potential energy between two places in an electric field	c. battery

18. Is the following sentence **true or false**?

“Three common voltage sources are batteries, solar cells, and generators.”
